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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,527	10/23/2000	Ji Su	16220-1	4891

7590 10/08/2002

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EXAMINER

MEDLEY, PETER M

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 10/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.	Applicant(s)
09/696,527	SU ET AL.
Examiner	Art Unit
Peter M Medley	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extension of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_\_.  
2a) This action is **FINAL**.      2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.  
**Disposition of Claims**  
4) Claim(s) 1-30 is/are pending in the application.  
    4a) Of the above claim(s) \_\_\_\_\_. is/are withdrawn from consideration.  
5) Claim(s) 19-30 is/are allowed.  
6) Claim(s) 1-5 is/are rejected.  
7) Claim(s) 6-18 is/are objected to.  
8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
    If approved, corrected drawings are required in reply to this Office action.  
12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) All    b) Some \*    c) None of:  
        1. Certified copies of the priority documents have been received.  
        2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
        3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
    \* See the attached detailed Office action for a list of the certified copies not received.  
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
    a) The translation of the foreign language provisional application has been received.  
15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

Claims 1-5 rejected under 35 U.S.C. 102 as being clearly anticipated by Applicant's own admission in the second paragraph of page 4.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lach et al in view of Pelrine et al ("Electrostriction of Polymer Films for Microactuator").

With respect to claims 1 and 4-5, Lach et al disclose in **fig. 5** a membrane structure comprising a membrane, a frame **10**, a plurality of threads **11**, and actuators **3**.

The reference does not disclose a polymer actuator.

The Lach et al disclose in the last paragraph of column 5 that the actuator is preferably linear. Pelrine et al disclose in **Fig. IV** a electrostrictive polymer actuator with high strains and good actuation pressures. It would have been obvious to one of ordinary skill in the art to use the actuator of Pelrine in the structure of Lach et al for the purpose of providing an actuator with high strains and good actuation pressures.

With respect to claims 2 and 3, Pelrine et al disclose in **Fig. VI** that the actuator expands and contracts.

### ***Response to Arguments***

Applicant's arguments filed 4 September 2002 have been fully considered but they are not persuasive. Applicant is not permitted to remove **fig. 2** from the prior art without a 132 affidavit. See MPEP 706.02(b). The 102 rejection will be withdrawn after the affidavit has been filed.

***Allowable Subject Matter***

Claims 6-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 19-30 are allowed.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter M Medley whose telephone number is 703-305-0494. The examiner can normally be reached on Monday-Friday 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

PM  
October 4, 2002

  
NESTOR RAMIREZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800